This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1.   (Original) A method for performing motion compensation on a compressed bitstream, the method comprising:

selecting a portion included in a current frame of the compressed bitstream;

obtaining a motion vector for the portion;

locating a reference portion in a reference frame identified by the motion vector;

performing motion compensation using a first memory source when the reference portion is stored in the first memory source;

creating a reference window comprising a set of reference window portions, the set of reference window portions including the reference portion identified by the motion vector; and

storing the set of reference window portions in the first memory source.

2.   (Original) The method of claim 1 wherein the first memory source is an on-chip memory source.

3.   (Original) The method of claim 1 further comprising re-creating the reference window when the reference region was stored in a second memory source.

4.   (Original) The method of claim 1 wherein the second memory source is an off-chip memory source.

5.   (Original) The method of claim 1 further comprising altering the reference window after motion compensation is performed.

6.   (Original) The method of claim 5 wherein altering the reference window comprises changing the number of reference window portions included in the set of reference window portions.

7.   (Original) The method of claim 6 wherein changing the number of reference window portions comprises increasing the number of reference window portions included in the set of reference window portions when the reference region is not stored in the first memory source.

8.   (Original) The method of claim 6 wherein changing the number of reference window portions comprises decreasing the number of reference window portions included in the set of reference window portions when the reference region is stored in the first memory source.

9.   (Original) The method of claim 6 wherein changing the number of reference window portions comprises decreasing the number of reference window portions included in the set of reference window portions when a network device required to perform the motion compensation is required to perform motion additional computational tasks.

10.   (Original) The method of claim 9 wherein the additional computation tasks include requantization-only based recoding of a second compressed bitstream.

11.   (Original) The method of claim 9 wherein the additional computation tasks include motion compensation based recoding of a second compressed bitstream.

12.   (Original) The method of claim 1 wherein the reference window has a rectangular array of reference window portions.

13.   (Original) The method of claim 12 the reference portion identified by the motion vector is the upper left reference window portion in the rectangular array.

14.   (Original) The method of claim 1 wherein the compressed bitstream is an MPEG compressed bitstream and the portion is a macroblock.

15.   (Original) The method of claim 13 wherein the reference window comprises a set of reference window sub-regions.

16.   (Original) The method of claim 15 wherein the reference window comprises between about 8 and 128 reference window sub-regions.

17.   (Original) The method of claim 16 wherein the reference window comprises between about 16 and 24 reference window sub-regions.

18.   (Original) A method for recoding a compressed bitstream, the method comprising:
        determining a motion index for a frame included in the compressed bitstream;
        performing motion compensation on data for the frame when the motion index satisfies a motion compensation criteria; and
        performing re-quantization on the data for the frame when the motion index satisfies a re-quantization criteria.

19.   (Original) The method of claim 18 wherein performing motion compensation comprises:
        creating a reference window comprising a set of reference window portions; and
        storing the set of reference window portions in a first memory source.

20.   (Original) The method of claim 18 wherein the motion index is determined using an inner product of the motion vectors generated from two adjacent macroblocks included in a compressed frame of an MPEG compressed bitstream.

21.   (Original) The method of claim 20 wherein the motion index comprises a composite of inner products generated from multiple macroblocks included in the frame.

22.   (Original) The method of claim 18 wherein the compressed bitstream is an MPEG compressed bitstream.

23.   (Original) The method of claim 18 wherein the motion index comprises information relating to the amount of motion in the frame.

24.   (Original) The method of claim 23 wherein the motion index comprises information relating to the amount of random motion in the frame.

25.   (Original) The method of claim 24 wherein the re-quantization criteria comprises a pre-determined level of random motion in the frame.

26.   (Original) The method of claim 23 wherein the motion compensation criteria comprises a pre-determined level of motion in the frame.

27.   (Original) The method of claim 18 wherein the re-quantization modifies the bit rate of the compressed bitstream to use an available bandwidth of a channel.

28.   (Original) The method of claim 27 wherein the motion index is used to determine the re-quantization step size of video data in a frame of the compressed bitstream.

29.   (Original) A method for performing motion compensation on an MPEG compressed bitstream, the method comprising:

    selecting a macroblock included in a current frame of the MPEG bitstream;

    obtaining a motion vector for the macroblock;

    locating a reference sub-region in a reference frame identified by the motion vector;

    performing motion compensation using a first memory source when the reference sub-region is stored in an on-chip memory source;

    creating a reference window comprising a set of reference window sub-regions, the set of reference window sub-regions including the reference sub-region identified by the motion vector; and

    storing the set of window sub-regions in the first memory source.

30.   (Original) The method of claim 29 further comprising re-creating the reference window when the reference sub-region was stored in a second memory source.

31.   (Original) The method of claim 30 wherein the second memory source is an off-chip memory source.

32.   (Original) The method of claim 29 further comprising altering the reference window after motion compensation is performed.

33.	(Original) The method of claim 29 wherein altering the reference window comprises changing the number of reference window sub-regions included in the set of reference window sub-regions.

34.	(Original) The method of claim 33 wherein changing the number of reference window sub-regions comprises increasing the number of reference window sub-regions included in the set of reference window sub-regions when the reference sub-region is not stored in the first memory source.

35.	(Original) The method of claim 29 wherein the reference window has a rectangular array of reference sub-regions.

36.	(Original) The method of claim 35 the reference sub-region identified by the motion vector is the upper left reference window sub-region in the rectangular array.

37.	(Original) A system for performing motion compensation on a compressed bitstream, the system comprising:

　　　means for selecting a portion included in a current frame of the compressed bitstream;

　　　means for obtaining a motion vector for the portion;

　　　means for locating a reference portion in a reference frame identified by the motion vector;

　　　means for performing motion compensation using a first memory source when the reference portion is stored in the first memory source;

　　　means for creating a reference window comprising a set of reference window portions, the set of reference window portions including the reference portion identified by the motion vector; and

　　　means for storing the set of reference window portions in the first memory source.

38.	(Currently Amended) A computer readable medium including instructions for performing motion compensation on a compressed bitstream <u>when the instructions are read by a processing device</u>, the instructions comprising:

instructions for receiving first compressed video data that may be displayed at a low resolution;

instructions for obtaining a motion vector for the portion;

instructions for locating a reference portion in a reference frame identified by the motion vector; and

instructions for performing motion compensation using the first memory source when the reference portion is stored in the first memory source;

instructions for creating a reference window comprising a set of reference window portions, the set of reference window portions including the reference portion identified by the motion vector; and

instructions for storing the set of reference window portions in the first memory source.